

**REMARKS**

Reconsideration and withdrawal of the rejections in the pending Office Action are respectfully requested in view of the following remarks.

**Summary of Office Action**

1) Claims 1-2 and 5-11 are rejected under 35 U.S.C. §102(b) or, in the alternative, under 35 U.S.C. §103(a) over U.S. Patent No. 5,989,747 (“TANAKA”).

The Office Action states that TANAKA essentially teaches all recitations of claims 1-2 and 5-11 except the process of corona discharge treatment performed on the positive electrode material. However, the Office Action concludes that the claims are product-by-process claims and their patentability does not depend on the method of production but on the product itself. The Office Action quotes MPEP §2113 which states that “ if the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.”

2) Claims 1-2 and 5-11 are rejected under 35 U.S.C. §102(b) over JP 07-183,027 (“KENICHI”).

Similarly to the above rejection, the Office Action states that KENICHI essentially teaches all recitations of claims 1-2 and 5-11 except the process of corona discharge treatment performed on the positive electrode material. However, the Office Action

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concludes that the claims are product-by-process claims and their patentability does not depend on the method of production but on the product itself. The Office Action quotes MPEP §2113 which states that “ if the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.”

3) Claims 3-4 are rejected under 35 U.S.C. §103(a) over U.S. Patent No. 5,989,747 (“TANAKA”) or JP 07-183,027 (“KENICHI”) and in view of JP 07-029,562.

The Office Action admits that TANAKA and KENICHI do not teach that the polymer separators of the batteries, including polyolefin materials, to be subject to corona discharge treatment. However, the Office Action states that JP 07-029,562 teaches a non-aqueous electrolyte battery comprising a polymer separator prepared by corona discharge. The Office Action concludes that it would have been obvious to subject the polymer separator of the batteries of TANAKA and KENICHI to corona discharge as the polymer separator will improve its electrolyte wettability and retaining ability of the separator providing improved ionic conduction. Further, the Office Action states that it will lessen the effects of voltage leakage from the separator, thus increasing the cycle lifetime of the battery.

**Response to Rejections**

1) Response to the rejection of claims 1-2 and 5-11 under 35 U.S.C. §102(b) or, in the alternative, under 35 U.S.C. §103(a) over U.S. Patent No. 5,989,747 (“TANAKA”).

Applicants respectfully submit that TANAKA does not teach or suggest that the corona discharge treatment should be performed on the electrode material. Instead, the corona discharge treatment in TANAKA is performed on the electrode sheet so that the electrode depolarizing mix solution can be uniformly coated on the surface of the stripe conductive sheet (i.e., on the conductive sheet and top surface of the adhesive tape piece).

In other words, the corona discharge treatment in TANAKA is performed on the electrode itself not on the electrode material. Also, there is no suggestion in TANAKA to change its corona treatment to arrive at the present invention. Because of this difference in what is the subject for the corona discharge treatment, the product of the present invention is different from TANAKA and is not anticipated or rendered obvious by TANAKA.

Further, the Office Action’s product-by-process argument would only be applicable if, as the Office Action points out, the product is the same as or obvious from a product of the prior art. Here, the product of the present invention is not the same or obvious from TANAKA, at least because the corona discharge treatment is applied to a different part of the product.

For above reasons alone, the rejection should be withdrawn.

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2) Response to the rejection of claims 1-2 and 5-11 under 35 U.S.C. §102(b) over JP 07-183,027 (“KENICHI”).

Applicants respectfully submit that KENICHI does not teach or suggest that the corona discharge treatment should be performed on the electrode material. Instead, the corona discharge treatment in KENICHI is performed on a negative electrode (made of carbonaceous material). In other words, the corona discharge treatment in KENICHI is performed on the negative electrode itself, not on the electrode material as presently claimed. Also, there is no suggestion in KENICHI to change its corona treatment to arrive at the present invention. Because of this difference in what is the subject for the corona discharge treatment, the product of the present invention is different from KENICHI and is not anticipated or rendered obvious by KENICHI.

Further, the Office Action’s product-by-process argument would only be applicable if, as the Office Action points out, the product is the same as or obvious from a product of the prior art. Here, the product of the present invention is not the same or obvious from KENICHI because the corona discharge treatment is applied to a different part of the product.

For above reasons, the rejection should be withdrawn.

3) Response to the rejection of claims 3-4 under 35 U.S.C. §103(a) over U.S. Patent No. 5,989,747 (“TANAKA”) or JP 07-183,027 (“KENICHI”) and in view of JP

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07-029,562.

Applicants respectfully submit that the combination of these documents (even assuming arguendo, that the combination would be proper) still would not teach or suggest that the corona discharge treatment is performed on the electrode material, not on the electrodes. Because the treatment is applied in different parts of the products, the products must necessarily be different.

Further, the Office Action's product-by-process argument would only be applicable if, as the Office Action points out, the product is the same as or obvious from a product of the prior art. Here, the product of the present invention is not the same or obvious from the combination of the prior art. For this reason alone, the rejection should be withdrawn.

Evan further, it is well settled that in order to combine prior documents to arrive at the claimed invention, there must be some suggestion from the cited document to make the combination. The Office Action alleges that the motivation to combine the cited documents is to "improve the electrolyte wettability and retaining ability of the separator providing improved ionic conduction. It will lessen the effects of voltage defects or leakage from the separator, thus increasing the cycle lifetime of the battery." However, even assuming arguendo, that this to be true, there is no suggestion in any of the cited documents to make such a change to arrive at the claimed invention, and therefore the Office Action has not made a *prima facie* case of obviousness. Again, for this reason alone,

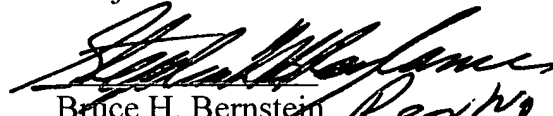
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this rejection should be withdrawn.

**CONCLUSION**

In view of the foregoing, it is believed that all of the claims in this application are in condition for allowance, which action is respectfully requested. If any issues yet remain which can be resolved by a telephone conference, the Examiner is respectfully invited to telephone the undersigned at the telephone number below.

Respectfully submitted.  
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